Educational Progress in a Population of Youth with Aggression and Emotional Disturbance: The Role of Risk and Protective Factors

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Youth with a pattern of aggression and emotional disturbance have well-described problems in a school setting. It is not known which particular psychosocial features of such high-risk populations best predict educational problems or progress. Comprehensive assessment of psychosocial resilience by inventorying known risk and protective factors has been shown to predict outcome in a variety of life domains in naturalistic, longitudinal studies of resilient high-risk children. In this study, we analyzed a number of risk and protective factors that were potentially predictive of educational progress in the male *Willie M.* population, a North Carolina group of youth with severe aggression and emotional disturbance. We found that several psychosocial protective factors, including good problem-solving skills, reading at or above grade level, ability to get along with peers and adults, likability, sense of humor, and having an adult mentor at school, were associated with positive educational progress. Substance use and living at home with the natural family were shown to have deleterious effects on school progress. The total number of protective factors was significantly associated with educational progress, whereas the total number of risk factors was unrelated to progress. These findings may have important implications for designing educational interventions for youth with emotional and behavioral disorders.

In 1981, as a result of a federal class-action lawsuit—*Willie M. et al. v. James B. Hunt, Jr., et al.*—the state of North Carolina entered into a consent decree agreeing to provide comprehensive rehabilitation services to a group of youth with serious emotional and behavioral disorders. One of the original plaintiffs—and the namesake of the present mental health program—was Willie M., a child with a pattern of aggressive behavior in the context of emotional disturbance who was being denied proper care for his various handicapping conditions. The court settlement mandated the state of North Carolina to begin to provide all plaintiffs with appropriate treatment, in accordance with their individual rehabilitation needs, and in the least restrictive environment necessary. The class membership was defined as any child under age 18 whom the state certified as being severely or chronically aggressive, neurologically or emotionally impaired, and who had been placed in public custody or excluded from access to needed treatment or educational services. On an annual basis, since the inception of the lawsuit, the state has maintained between 1,300 and 1,500 certified class members at any point in time (North Carolina Department of Human Resources and Department of Public Instruction, 1997). The sole unifying feature of class members is a pattern of severe or persistent aggressive behavior, which has led to the exclusion of these children from traditional mental health treatment or educational settings. The identified class members constitute a group of children who are extremely impaired, have a generally poor prognosis for psychosocial success, and are extremely difficult to treat in traditional mental health and special educational settings.

As a result of the lawsuit, a diverse system of treatment and special education interventions has arisen to meet the individual needs of each class member. In order to treat and educate these challenging youths in the least restrictive environment, these services include highly supervised residential treatment settings, therapeutic foster care, and in-home services, as well as educational services ranging from day treatment programs to one-on-one classroom assistance. With the mandate to provide all *Willie M.* class members with appropriate treatment and educational services, the state and other lawsuit stakeholders defined a number of desired outcomes for *Willie M.* class members in several life domains (North

Carolina Department of Human Resources and Department of Public Instruction, 1992). The Program Evaluation Branch of the *Willie M.* program operationalized these desired outcomes and developed a comprehensive evaluation tool known as the Assessment and Outcomes Instrument (AOI; North Carolina Department of Human Resources and Department of Public Instruction, 1994). The AOI was designed as a tool to assess the status and monitor the progress of individual class members annually for treatment planning and outcome research purposes.

The desired educational outcome was defined as follows: "The class member attends and participates in educational services appropriate to his/her needs" (N.C. Dept. of Human Resources and Dept. of Public Instruction, 1992, p. 1). The AOI assesses educational progress toward a child's individual educational goals irrespective of special educational needs or restrictiveness of the educational placement. Some *Willie M.* students are in mainstream classes, but most (89%) have special educational needs. Educational progress as assessed by the AOI consists of positive participation in school with consistent movement towards individualized goals reflected in an Individualized Education Program (IEP). On the other hand, poor outcome is defined as substantial interference with progress toward a child's academic goals due to frequent absences or serious behavioral problems.

In addition to rating a youth's progress in various life domains, the AOI makes a comprehensive inventory of past and current psychosocial risk and protective factors in the life of each class member. It is now well accepted that children who possess a number of protective factors are resilient, that is, less likely to suffer poor psychosocial outcomes in spite of exposure to risk factors (Garmezy, Masten, & Tellegen, 1984; Luthar & Zigler, 1991; Rutter, 1985; Seifer, Sameroff, Baldwin, & Baldwin, 1992; Werner & Smith, 1982). Because of the complex interplay between risk and protective factors, any meaningful assessment of a high-risk clinical population requires a complete inventory of both risk and protective factors to allow prognostication or interchild comparisons. By assessing both risk and protective factors, a child's relative level of resilience can be characterized, which is hypothesized to predict psychosocial outcomes in a variety of life domains including educational progress.

Demographic reviews of the *Willie M.* class member population have established that approximately 80% were boys and 20% were girls. Ethnic distribution was nearly equally divided between White and African American children, with small proportions of Hispanic, Asian, and Native American children. All class members had an Axis I psychiatric diagnosis, and over 75% had two or more diagnoses. Conduct disorder was the most prevalent Axis I diagnosis, occurring for 55% of all class members. Of the other diagnoses, attention-deficit/hyperactivity disorder (ADHD) occurred for 36% of the class members, other disruptive behavior disorders for 21%, depressive disorders for 19%, posttraumatic stress disorders for 16%, substance abuse for 13%, bipolar disorder for 6%, and psychotic disorders for 3% (N.C. Dept. of Human Resources and Dept. of Public Instruction, 1997). More than 90% of *Willie M.* class members had developed aggressive behaviors by early school age. Nearly 90% of all class members were classified as exceptional students, 65% with behavioral and emotional handicaps; 11% were classified mentally retarded, 6% with specific learning disabilities, and a few were classified as exceptional based on above-average ability.

A number of investigators have compared the severity of psychiatric problems among *Willie M.* class members with selected, age-matched populations of children. In comparison with other children served by public mental health services, *Willie M.* children had increased levels of psychiatric symptoms, developmental delays and risk factors for aggression (Curry, Pelissier, Woodford, & Lochman, 1988; Griffin, 1987). Certain community providers have reported that as many as 80% of *Willie M.* children with an initial diagnosis of conduct disorder were later found to have multiple comorbid diagnoses as well as severe family problems (Keith, 1988). Other researchers have found greater numbers of family problems for *Willie M.* children compared with a control group of children treated in residential treatment programs (Griffin, 1987). In comparison to an age-matched group of juvenile delinquents, *Willie M.* class members were noted to show nearly twice the incidence of attention-deficit/hyperactivity disorder (ADHD) and three times the incidence of learning disabilities (Smith, 1989). *Willie M.* children have also been found at increased risk of suicidal behavior in comparison with controls (Cairns, Peterson, & Neckerman, 1988). Finally, nearly two thirds of the class members have experienced multiple residential placements, multiple psychiatric hospitalizations, or multiple school placements in the course of their lives.

Because of the multitude of risk factors and the heterogeneity of *Willie M.* youth, outcomes and progress vary among class members. The purpose of this study is to determine (a) whether educational progress for adolescent boys with emotional and behavioral disorders can be predicted by the individual child's total number of risk factors and protective factors, and (b) which psychosocial risk factors and protective factors are most strongly associated with school progress in such students.

Method

Participants

The participants in this study were 652 teenage boys, ages 13 to 17 years, who received the first statewide administration of the *Willie M.* Assessment and Outcomes Instrument. The educational and demographic characteristics of the study sample are summarized in Table 1, which is presented later in this article.

Measures

The AOI is a multi-informant questionnaire, developed by the *Willie M.* pro-

gram, consisting of a developmental risk assessment (DRA), a child interview (CI), and a functional domain assessment (FDA). Also included in the annual administration of the AOI is the Brief Psychiatric Rating Scale for Children (BPRS-C; Overall & Pfefferbaum, 1982). These various components of the AOI are completed by different members of each child's treatment team, and the child's case manager coordinates the annual process of AOI data collection. The components of the AOI, which are described in detail below, include numerous ratings of functioning in a range of psychosocial life domains (residential, school, behavioral, social, health, legal, and vocational) and a comprehensive inventory of widely accepted psychosocial risk factors and protective factors in the life of each child. The data reported here concern the inventory of risk and protective factors and the educational progress measure from the FDA.

Developmental Risk Assessment. The DRA is an inventory of the presence or absence of key developmental risk factors and protective factors at three different life stages: preschool, schoolage, and teenage. Information is obtained from medical and social service records or by interviewing family members or others familiar with the child's development. The DRA consists of a total of 82 items and ascertains the presence or absence of known risk factors and protective factors, such as perinatal pregnancy complications; difficult, shy, or easy early temperament; quality of mother–infant attachment; family size, structure, function, and income; diagnosed childhood disorders; quality of parent–child relationship; parental functioning and disorders; degree of social support for the family; and history of child abuse, neglect, exposure to family violence, or extended separations from the family. This portion of the AOI is completed by the local mental health case manager or by other members of the treatment team knowledgeable about the developmental history of the child.

Child Interview. The CI is a semistructured interview questionnaire that is administered by the treatment team member thought to have the best rapport with the child. It consists of 35 items. These items include 18 yes/no items that inquire about the presence or absence of friends and adult mentors, perceived competencies, perception of locus of control, community involvement, use of faith or prayer, presence of symptoms or perceived problems, use of substances, history of violent behaviors, and recollection of family history. Furthermore, the CI includes 14 Likert scale items, ranging from 1 to 5, rating the degree of satisfaction with residence, school, and treatment; frequency of contacts with friends; quality of social support from friends and mentors; and perception of the quality of the relationship with parents. Finally, there are 3 open-ended questions on hopes and plans for the future, helpfulness of current treatment, and desire for other types of help.

Functional Domain Assessment. The FDA collects information related to the child's status and level of functioning over the preceding 3 months. It includes a semistructured interview with the youth's teacher and the family. It consists of 40 Likert-type items ranging from 1 to 5 (1 = *poor functioning*, 5 = *excellent functioning*). These items include residential safety and degree of restrictiveness; use of social skills; degree of social support from family, peers, mentors, agency, or community groups; health status; frequency of vocational activities; educational progress and degree of restrictiveness; and behaviors including verbal and physical aggression, self-harm, substance use, risk taking, and degree of cooperation with treatment. Other information, related to the nature of recent residential placements, behavior within these placements, use of psychiatric and medical services, legal status, and an inventory of the child's known lifetime violent behaviors is also collected. The FDA includes a semistructured interview for the child's school teacher that consists of 11 items including ratings of restrictiveness of the educational setting; school progress; academic status, IQ, reading, and problem-solving skills; and social skills in the school setting. The FDA also includes a semistructured interview for the family, consisting of 18 items that rate the child's functioning and behavior at home, the family's satisfaction with services, and the level of family involvement in treatment. The family interview is completed by the person on the team with the most favorable rapport with the family. The FDA is usually completed by the case manager with the input of other team members.

Procedures

The AOI is administered annually to each class member to monitor progress. The AOI is a multi-informant assessment including interviews of the youth, his or her teacher, and his or her parents that are coordinated and completed by the child's *Willie M.* case manager. Before the implementation of the AOI, the state *Willie M.* office has held training sessions in the use and administration of the instrument to increase its reliability. Data contributing to the inventory of individual risk factors and protective factors emerge from multiple sources in the AOI, including dichotomous or ordinal responses that indicate the presence or absence of a particular risk or protective factor. In this study, the functional scale of interest (dependent variable) was the Likert rating of educational progress from the FDA. The low end of this scale indicates that a child has dropped out of school or has been removed from educational services, and the high end indicates steady progress towards individual educational goals or the completion of high school or equivalent. Interrater reliability was determined during preliminary investigations, and the correlation coefficient on the educational progress scale was .69, significant at the $p < .001$ level.

Analysis

This analysis consists only of data related to the FDA measure of educational progress, the inventory of risk factors and protective factors found in this sample, and the association of these

factors to the educational progress variable. To perform a multiple regression analysis of educational progress on the individual risk and protective factors, the risk factor "school dropout" and the protective factor "able to function as a good student," were excluded, because of their direct relationship to educational progress. All the other individual risk factors and protective factors listed in Tables 2 and 3 (shown later in this article) were entered into a regression model to explore their relationship to the dependent variable educational progress. Finally, the relationship between the total number of risk factors and protective factors and educational progress was tested.

Using SAS GLM (SAS Institute, 1985) procedures, the association between psychosocial risk and protective factors and school progress was examined. A general linear model was chosen because it has the advantage over a classical multiple regression procedure of allowing the analysis of each dependent variable using all possible observations rather than only variables without missing values. We used a type III sum of squares, a type of partial sum of squares whose main strength in this study lies in its ability to test hypotheses as if there were no missing cells. Thus, hypotheses are not dependent on cell counts. The F-statistic measures the significance of the whole model in explaining the dependent variable. The t test was used to determine whether individual protective factors had a slope that was significantly different from zero.

Results

The educational characteristics of the *Willie M.* class members are shown in Table 1. Educational status and progress are summarized from the data gathered from the AOI Likert scale for educational progress as well as from other information gathered from the educational portion of the AOI.

The prevalence of each of the individual risk factors and protective factors among the participants is presented in Tables 2 and 3, as are the significant findings from the regression analysis of individual factors on educational progress. Because so many variables were entered into the models, the significance level for the multiple regression analyses was set at $p < .01$, to control for type I errors. The regression model for teenage boys, which entered the risk factors and protective factors individually, was a significant predictor of educational progress, $F(54, 252) = 6.49, p < .0001$, explaining 31.3% of the variance. The only individual risk factor found to be negatively predictive of educational progress was use of alcohol or drugs, $t(117) = -4.44, p < .0001$ (Table 2). Several individual protective factors were found to be significantly related to positive school progress (Table 3). These protective factors are: gets along with peers, $t(187) = 4.60, p < .0001$; good problem-solving/reasoning skills, $t(272) = 3.86, p < .0001$; relationship with a mentor at school, $t(338) = 3.55, p < .0005$; likability, $t(362) = 3.09, p < .005$; and ability to get along with adults, $t(298) = 3.03, p < .005$. Reading ability, $t(136) = 2.36, p = .019$, and sense of humor, $t(329) = 2.05, p = .04$, approached significance. Living at home with the natural family—usually thought to be a protective fac-

TABLE 1
Demographic and Educational Characteristics of the Study Sample of *Willie M.* Class Members

Characteristic	*n*	%
Race/ethnicity		
White	334	51.5
African American	286	44.2
Other	28	4.3
Poverty/public assistance	545	85.0
Residential status		
Home	201	31.0
Foster care	109	17.0
Group home	208	32.0
Institutional setting	83	13.0
IQ		
Mental retardation (IQ < 70)	129	22.8
IQ between 70 and 99	363	64.0
IQ over 100	75	13.2
Reading level		
2 or more years below grade	376	63.0
1 year, or less, below grade	221	37.0
School setting		
Locked school setting	133	21.8
Alternative or homebound school	158	25.9
Mix of special classes	228	37.4
Fully mainstreamed	91	14.9
School failure now or in past	310	47.8
Educational progress		
Not enrolled or dropped out	71	10.6
Frequent disruption of progress	290	43.9
Occasional setbacks	214	32.4
On course with goals or completed	84	12.7

Note. $N = 652$. Percentages are based on all data available for a given set of variables. Some data may have been missing for individual youth. Average age = 15.1 years.

tor—was negatively related to educational progress, $t(196) = -3.57$, $p < .0005$. We found no significant association between the total number of risk factors and school progress, $t(652) = 0.48$, $p = .63$. However, the total number of psychosocial protective factors did show a significant association with positive school progress, $t(652) = 7.57$, $p < .0001$.

Discussion

The main finding in this study is that certain psychosocial protective factors—already known to be associated with resilience in community samples of high-risk youth—also predict progress toward educational goals, even in this population of youth with extreme impairment. For educational progress, the essential protective factors included not only cognitive skills such as problem-solving ability, but also social competencies including general likability and the ability to get along with peers and adults. Having an adult mentor at school was also predictive of school success for these boys, whereas substance use was a strong negative predictor. Reading ability and sense of humor both approached significance. Although reading and problem-solving skills seem conducive to school progress—as would be expected—the other critical factors all lie in the domains of social skills and support. These findings suggest that promoting school progress in high-risk youth should focus not only on developing cognitive skills, but also on building social skills and finding mentors at school.

It is difficult to account for the unexpected finding that *Willie M.* boys who live at home with their natural parents—normally thought to be a protective factor—seem to be at greater risk of poor school progress. This may be explained by the extreme level of challenge faced by the families of *Willie M.* children (Griffin, 1987). In these very stressed families, out-of-home placement into therapeutic foster care, group homes, or other residential treatment may improve the children's likelihood of success in school. This seems to be an example of a presumed protective factor having unforeseen consequences among specific populations. For example, Luthar and Zigler (1991) have found that certain high-risk children with high IQ—a protective factor in most cases—may be more susceptible to stress in some situations, possibly due to the insight that they bring to bear on their painful experiences.

For the boys in this study, educational progress was strongly predicted by the total number of psychosocial protective factors, but not by the total number of risk factors. It is somewhat surprising that the total number of risk factors is not correlated with school outcome. Risk and resilience research has suggested that the risk of poor life outcomes rises exponentially with four

TABLE 2
Prevalence and Multiple Regression Analysis of Psychosocial Risk Factors on Educational Progress in Teenage *Willie M.* Boys

Risk factor	Prevalence		Regression	
	n	%	*t*	*p*
Complications of pregnancy, birth	172	27		
Difficult temperament	327	51		
Shy/anxious temperament	186	29		
Chronic medical disorder	214	33		
Neurodevelopmental, neurologic disorders	323	50		
Mental retardation (IQ < 70)	129	23		
Poor mother–infant attachment	215	34		
Frequent absence of caregiver in infancy	241	38		
Negative parent–child relationship	544	83		
Poverty	556	85		
Single parent home	567	87		
Frequent family moves	368	56		
Siblings born within 2 years	286	44		
Four or more siblings	167	26		
Fetal substance exposure	220	35		
Parental substance abuse	437	67		
Parental mental/emotional disorder	393	60		
Parental criminality	286	44		
Witness to violence/severe conflict	514	81		
Child neglect	282	43		
Physical abuse	365	57		
Sexual abuse	210	33		
Substance use	117	18	−4.45	.0001
Delinquent peer group	129	20		
Delinquency/court involvement	600	92		
Removal from home by public agency	486	75		

Note. $N = 652$. Percentages are given for available data. Regression results are shown only for those findings significant at $p > .01$. Total risk factors average = 14.7, $t = 0.48$, $p = 0.63$.

or more early developmental risk factors (Werner & Smith, 1982). It is worth noting that the average *Willie M.* youth possesses 15 psychosocial risk factors (N.C. Dept. of Human Resources and Dept. of Public Instruction, 1997). This suggests that, for such a high-risk population, there is some risk threshold beyond which the increased numbers of risk factors contribute minimally to poor outcome. Among such extremely high-risk students, the effect of increasing numbers of risk factors seems not nearly as important as the possession of protective factors in determining the likelihood of school progress. For this extremely high-risk population, the presence of protective factors is what seems to tip the scales towards relative resilience and successful educational outcomes.

Because of the unique criteria for inclusion into the *Willie M.* class, as well as the intensive services received by these children, great caution should be exercised in generalizing these findings to other high-risk groups. Nonetheless, educational outcome studies of similar populations of high-risk youth provide a useful framework for comparison with the outcomes for *Willie M.* class members. For example, one long-term follow-up study of previously incarcerated violent delinquents reported that only 10% had graduated from high school (Lewis, Yeager, Lovely, Stein, & Cobham-Portorreal, 1994). Another longitudinal study of social development in a large population of preadolescent boys found that only 41% of aggressive youth were in age-appropriate general education classrooms, compared with 91% of their nonaggressive peers (Schaal, Tremblay, Soussignan, & Susman, 1996). Longitudinal follow-up studies of youth with conduct disorder, hyperactivity, or other emotional disorders have shown that nearly one fourth functioned poorly in school at the time of a 4-year follow-up (Offord, Boyle, & Racine, 1992; Wilson & Marcotte, 1996). Studies of risk factors for school dropout have identified low socioeconomic status, lack of parental academic support, frequent moves, failing a grade, absenteeism, and behavioral problems in school as significant predictors of early dropout (Rumberger, 1995). These risk factors are also prevalent in *Willie M.* youth, but it is not certain that the presence of the key protective factors found in this study would forestall dropout in other populations.

Special educational interventions aimed at enhancing school progress of high-risk youth could benefit from these

TABLE 3
Prevalence and Multiple Regression Analysis of Psychosocial Protective Factors on Educational Progress in Teenage *Willie M.* Boys

	Prevalence		Regression	
Protective factor	*n*	%	*t* value	*p* value
Easy temperament	230	36		
Outgoing, independent toddler	269	42		
Secure/positive mother–infant attachment	307	48		
Warm parent–child relationship	429	66		
Perception that parent cares	515	79		
Good problem-solving/reasoning skills	272	42	3.86	.0001
Good reader, grade level or better	136	21	(2.36)	(.019)
Above average IQ	75	13		
Gets along with peers	187	29	4.60	.0001
Gets along with adults	298	46	3.03	.0025
Likable	362	56	3.09	.0021
Sense of humor	329	51	(2.05)	(.041)
Empathic/nurturant	148	23		
Perceived competencies	613	94		
Internal locus of control	305	47		
Inner faith/spirituality of the child	250	39		
Consistent parental employment	302	47		
Parental education, high school or more	402	62		
Alternate caregivers available to family	358	56		
Regular family church involvement	122	19		
Predictable rules, routines, rituals at home	129	20		
Discipline with discussion at home	135	21		
Adult mentor outside the immediate family	319	49		
Adult mentor at school	338	52	3.55	.0004
Community/church group for the child	194	30	(1.81)	(.070)
Close peer support	361	56		
Extracurricular/vocational involvement	263	41		
Living at home	196	30	–3.57	.0004

Note. $N = 652$. Percentages are given for available data. Regression results in parentheses are those factors that approach significance. Total protective factors average = 12.2, $t = 7.57$, $p = .0001$.

findings. Social skills interventions that target aspects of likability and techniques for getting along with others—although generally shown to be context-bound to a given ecological setting—may nevertheless facilitate educational progress among youth with emotional disorders. Academic efforts could focus on developing problem-solving skills. The persistent and repeated use of interpersonal problem-solving strategies (Shure & Spivak, 1988) at each of the many crisis opportunities created by such disruptive youth would combine the teaching of social skills and problem solving. Finally, promoting a school setting that emphasizes finding each high-risk child an adult mentor, who can reach out and take a special interest in that child, may go a long way toward enhancing educational progress in this population. It is unclear which or whether any of these psychosocial protective factors is inherent or can be externally instilled, but programs that are aimed at providing adult mentors for high-risk youth, such as Big Brothers/Big Sisters, have been shown to improve school attendance and performance (Tierney, Grossman, & Resch, 1995). Other reviews of the problems of teaching high-risk youth have concluded that assertive social support elements in the school setting are crucial to successful outcomes (Stallings, 1995). The present study seems to support previous findings indicating that youth at risk of educational failure or dropout may benefit from both formal and informal interventions that build protective factors and thereby promote psychosocial resilience.

This study has a number of significant shortcomings. Much of the data on early developmental risk factors and protective factors are retrospective and were obtained from sometimes incomplete public agency records and parent interviews that rely on distant recollections. Another shortcoming is the lack of rigorous psychometric testing of the AOI. In preliminary trials, the rating scale for educational progress revealed acceptable interrater reliability when administered by frontline case workers in the field, but the full inventory of psychosocial risk and protective factors brings together multi-informant data that await full reliability testing. As far as we are aware, the AOI, based on the Brief Resiliency Checklist (Sanchez & Vance, 1995), is the first widely administered, comprehensive inventory of resilience in a high-risk clinical population. The AOI was designed from the outset as a field tool for use by clinically trained direct care staff in assessment and treatment planning. Findings from the use of the AOI may therefore be of interest to a wide range of clinicians and caseworkers who work in the public sector with high-risk children and families.

A number of questions are left unanswered by this study. The AOI will continue to be administered annually to all *Willie M.* class members for the next several years. This will provide the opportunity to examine the effects of risk factors and protective factors on a longitudinal basis. Long-term educational outcomes for extremely high-risk youth can be ascertained in relation to a range of variables. Of particular interest will be the close examination of those class members who achieve long-term school success in spite of the odds. The AOI satisfies the criteria recently set forth for optimal studies of children's mental health intervention outcomes, including symptom and functional ratings, consumer perspectives, characterization of the child's environment, and service system characteristics (Hoagwood, Jensen, Petti, & Burns, 1996). Its further analysis over the course of the treatment of this challenging population should yield a wealth of insight. Given the importance of certain psychosocial protective factors in mediating educational progress demonstrated in this study, and the many studies of resilience that have found protective factors to be strongly related to life outcomes, it seems crucial to carefully assess the degree of resilience whenever studying high-risk youth. Likewise, clinicians and policymakers need to heed the call of Werner and Smith (1992) to develop and promote treatment and educational interventions that build protective factors such as those described in this study into the lives of high-risk youth.

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